

25. The method as defined in claim 24 wherein the method further comprises the steps of reconfiguring through configuration software the interconnections between the first set of network devices, the switch/router board, and the single board computer to thereby define a second network function and a second network topology for the Open IP Services Platform, without having to change the first set of network devices.

26. The method as defined in claim 25 wherein the method further comprises the steps of:

1) removing the first set of network devices from the Open IP Services Platform;

2) coupling a second set of network devices to the at least two connector buses; and

3) configuring interconnections between the second set of network devices, the switch/router board, and the single board computer to thereby define a third network function and a third network topology for the Open IP Services Platform.

27. A local network topology that decreases congestion on

trunk lines between the local network structure and a global information network, said system comprising:

5 a local switch fabric network matrix as the local network topology, wherein the switch fabric network matrix is comprised of a plurality of network switching node devices; and

10 a connection from the local switch fabric network matrix to a trunk line, wherein the trunk line is in communication with the switch fabric network matrix and the global information network, thereby enabling transfer of data and voice communication therebetween.

15 28. The system as defined in claim 27 wherein the system further comprises at least one end user coupled to one of the plurality of network switching node devices.

20 29. The system as defined in claim 28 wherein the system further comprises at least one mass storage device associated with each of the plurality of network switching node devices, thereby enabling each network switching node device to cache data that can be stored on the global information network.

30. The system as defined in claim 29 wherein the system further comprises a plurality of Open IP Services Platforms to function as the plurality of network switching node devices.

5

31. The system as defined in claim 30 wherein each of the plurality of Open IP Services Platforms further comprises

a single board computer (SBC), including memory;

an open architecture Operating System (OS) stored in the memory;

at least two bus connectors for receiving cards that perform network functions, wherein the at least two bus connectors are coupled to the SBC;

a switch/router board coupled to the single board computer;

a plurality of network ports, wherein the plurality of network ports are coupled on a first side to the switch/router board, and provide a connection to a network on a second side thereof; and

configuration software for controlling interconnections between the at least two bus connectors, the switch/router board, and the SBC.